



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,143	10/30/2000	Satoshi Shinada	Q60866	6582

7590 08/19/2003  
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
WASHINGTON, DC 20037-3202

EXAMINER

NGHIEM, MICHAEL P

ART UNIT PAPER NUMBER

2863

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/698,143

Applicant(s)

SHINADA ET AL.

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 18, 20-25, 34, 36 and 38-46 is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, 10-12, 14-16, 19, 26, 32 and 47 is/are rejected.
- 7) ☒ Claim(s) 9, 13, 17, 27-31, 33, 35, 37 and 48-50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

The Amendment filed on May 19, 2003 has been acknowledged.

### ***Specification***

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitation of re-inserting the ink cartridge into the ink jet recording apparatus in a second direction which is different from a first direction (claims 49, 50) is not described in the specification.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16 and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2863

Claim 16, The relationship between the ink chamber (line 3) and the internal space (line 5) of the container body is not recited.

Is there a relationship between the ink chamber and the first and second divided chambers?

Claim 50, "said second direction" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Takata (US 5,631,682).

Takata discloses all the claimed features of the invention including:

- an ink cartridge (Fig. 1) for use in an ink jet recording apparatus (Fig. 2) comprising:

Art Unit: 2863

- a container body (20) having an ink chamber (chamber of 20) and an opening portion (21) wherein an ink absorbing member (22) for absorbing ink is housed in said ink chamber (Fig. 1);

- an ink supply port (26) which communicates said ink chamber to a recording head (16);

- a lid member (24) sealing said opening portion of said container body (Fig. 1);

- a spacer (32), which is disposed between said lid member and said ink absorbing member and is separate from said lid member (Fig. 1), wherein said spacer has a base portion which faces said lid member (Fig. 1), and a pressing portion (bottom of 32) for pressing said ink absorbing member toward said ink supply port (Fig. 1);

- a plurality of through holes are provided so as to oppose an injecting port independent of an extension direction of said spacer and so as to be symmetric with respect to each other (Fig. 3);

- said spacer presses said ink absorbing member toward said ink supply port at least at an area where said ink absorbing member opposes said ink supply port (Fig. 1);

- said pressing portion comprises a rib (33) extending to a longitudinal direction of said container body at an opposite side to said ink absorbing member (Figs. 1, 3);

- a projection (33) engaging with said lid member is formed in said base portion (Figs. 1, 3);

- said pressing portion comprises plural ribs (33's) extending to a longitudinal direction of said container body, and each of said plural ribs is joined to each other (Fig. 3);

Art Unit: 2863

- said pressing portion comprises ribs which are positioned at both sides of said container body in a width direction (Fig. 3);

- projections are formed at corners of said base portion in a longitudinal direction so as to contact with an inside of said ink container body (33's are formed at corners of base of 32, Fig. 3);

- said spacer comprises ribs extending to a longitudinal direction of said container body at the opposite side to said ink absorbing member, and said ribs are provided with a convex portion (concave ends of 33's) at an area of said ink absorbing member which opposes said ink supply port (Fig. 3).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Ishinaga et al. (US 6,336,719).

Ishinaga et al. discloses all the claimed features of the invention including:

- an ink cartridge (100) for use in an ink jet recording apparatus (Fig. 2) comprising:

Art Unit: 2863

- a container body (body of 100) having an ink absorbing member (102) for absorbing ink in an ink chamber (101);
- an ink supply port (100a) which communicates said ink chamber to a recording head (column 13, line 10);
- an internal space of said container body is divided into a plurality of areas by walls (Fig. 2),
- wherein at least one of said areas stores ink (101) and at least one of said areas is isolated from the stored ink (103), and wherein only said at least one of said areas storing ink (101) is provided with said ink supply port and said ink absorbing member (Fig. 2).

Claims 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinada et al. (US 5,790,158).

Shinada et al. discloses all the claimed features of the invention including:

- an ink cartridge (Figs. 15's) for use in an ink jet recording apparatus (Fig. 1), comprising:
  - a container body (501) having an ink absorbing member (520) for absorbing ink in an ink chamber (511);
  - ink supply ports (513, 513', 513'') which communicate said ink chamber to a recording head (4);

Art Unit: 2863

- an internal space of said container body is divided into a first divided chamber (511) and a second divided chamber (512) by an area wall (510) parallel to an ink supply ports arrangement direction (Figs. 15's), said first divided chamber being isolated from said second divided chamber by said area wall (510 isolates 511 from 512),

- wherein said first divided chamber is further divided into areas by chamber walls (502, 503) perpendicular to said area wall (Figs. 15's), and each of said areas is provided with one of said ink supply ports (513, 513', 513''), wherein said second divided chamber contains one of reserve ink (ink), and

- wherein said reserve ink is supplied to said recording head (via 511 and 519);

- said internal space of said container body is divided by first walls (502) perpendicular to an ink supply needles (550's) arrangement direction (Figs. 15's, 16);

Claim 32 is rejected under 35 U.S.C. 102(e) as being anticipated by Matsuzaki et al. (US 6,416,152).

Matsuzaki et al. discloses all the claimed features of the invention including:

- an ink cartridge (20, Figs. 7's) for use in an ink jet recording apparatus (Fig. 1) comprising:

- a container body (23) having an ink absorbing member (24) for absorbing ink in an ink chamber (Fig. 2);

- an ink supply port (21) which communicates said ink chamber to a recording head (8);



Art Unit: 2863

- a lid member (22) sealing an opening portion of said container body;
- a spacer (projections from top wall, Fig. 8) inserted between said lid member and said ink absorbing member for pressing said ink absorbing member toward said ink supply port (Fig. 8);
- wherein a storage device (30) storing information regarding an ink stored amount is attached so as to be readable by a recording apparatus (Figs. 7's, 8).

Claims 19, 26, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Nozawa et al. (US 6,102,533).

Nozawa et al. discloses all the claimed features of the invention including:

- an ink cartridge (Fig. 6) for use in an ink jet recording apparatus (Fig. 10), comprising:
  - a container body (400) installed in a holder (1) of the ink jet recording apparatus having an ink absorbing member (416) for absorbing ink in an ink chamber;
  - an ink supply port (401) which communicates said ink chamber to a recording head (100) (Fig. 1), wherein said ink supply port is formed on a bottom wall of said container body (Fig. 6);
  - a concave portion (first 410) formed on a side wall of said container body and extending from the bottom wall of said container body (Fig. 6), wherein said concave portion protrudes into said ink chamber (Fig. 6); and a wall partitioning (partition, Fig. 6) said ink chamber, wherein said wall is positioned inside of the side wall in contact with the holder (Fig. 6);

- a second concave portion (second 410) formed on a second side wall of said container body to protrude into said ink chamber (Fig. 6);

- said wall is positioned inside of the side wall in contact with the holder, and wherein said first side wall and said second side wall oppose one another (Fig. 6).

### ***Allowable Subject Matter***

5. Claims 9, 13, 17, 27-31, 33, 35, 37, and 48-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 2, 18, 20-25, 34, 36, and 38-46 are allowed.

### ***Reasons For Allowance***

7. The combination or method as claimed wherein an ink injecting port and an air communicating port are formed in said lid member, and through holes are formed in said spacer so as to be opposed at least to said ink injecting port (claim 2) or a convex portion is formed at said ink supply port, said convex portion protrudes from a bottom of said container body and has an ink flow path communicating with said ink supply port (claim 9) or each of said plurality of ink chambers is provided with said ink

Art Unit: 2863

absorbing member and said spacer (claim 13) or said container body is installed in an air tight and gas impermeable package so as to maintain a pressure lower than atmospheric pressure (claim 17) or a first rib height of said first ribs is different than a second rib height of said second ribs, and wherein a first member volume of said first ink absorbing member is different than a second member volume of said second ink absorbing member (claims 18, 42) or at least one rib formed at said concave portion so as to be parallel to the third side wall and to protrude to said ink supply port (claim 20) or a bottom portion of the side wall in said container body protrudes to the ink chamber (claim 27) or said container body has a second side wall which is shorter than said first side wall (claim 28) or said protruded portion includes a sloping portion (claim 29) or said ink absorbing member is strongly compressed at a central area of a bottom portion of said ink chamber (claim 30) or said ink supply port communicates with a concave portion formed at a projection extending from a substantially central portion of the bottom wall (claim 31) or a storage device storing information regarding an ink stored amount is attached so as to be readable by a recording apparatus (claims 33, 35, 45, 46) or each chamber is supplied with at least one ink supply port (claim 48) or re-inserting the ink cartridge into the ink jet recording apparatus in a second direction, said second direction is different from a first direction (claims 49, 50) is not disclosed, suggested, or made obvious by the prior art of record.

***Response to Arguments***

8. Applicant's arguments filed on May 19, 2003 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejections regarding claims 1, 3-8, and 10-12, Applicants argue that Takata does not disclose that the spacer (32) includes a base portion which faces the lid member and pressing portion for pressing said ink absorbing member toward said ink supply port.

Examiner's position is that Takata discloses a spacer (32) including a base portion which faces the lid member (body of 32 has surface facing lid 24, Fig. 1) and pressing portion (bottom surface of 32) for pressing said ink absorbing member (30) toward said ink supply port (Fig. 1). Since film (34) wraps tightly around foam (30) and spacer (32) (column 3, line 67 – column 4, line 2), the bottom surface of spacer (32) presses against foam (30).

With respect to claim 14, Applicants argue that Ishinaga fails to disclose that "an internal space of said container body is divided into a plurality of areas by walls" such that "at least one of said areas stores ink and at least one of said areas is isolated from the stored ink".

Examiner's position is that Ishinaga discloses an internal space of said container body is divided into a plurality of areas by walls (Fig. 1) such that at least one of said areas stores ink (101) and at least one of said areas (103) is isolated from the stored ink (Fig.

Art Unit: 2863

1). Even though there is communication between (101) and (103) via (110), (103) can be said to be isolated from (101) in the sense that that (103) is separated from (101) by wall (111).

With respect to claims 14-16, Applicants argue that Shinada fails to disclose that an internal space of said container body is divided into a plurality of areas by walls such that at least one of said areas stores ink and at least one of said areas is isolated from the stored ink.

Examiner's position is that Shinada discloses an internal space of said container body is divided into a plurality of areas (511, 512) by walls (510) such that at least one of said areas stores ink (511) and at least one of said areas (512) is isolated from the stored ink (Figs. 15's). Even though there is communication between (511) and (512) via (519), (512) can be said to be isolated from (511) in the sense that that (512) is separated from (511) by wall (510).

With respect to claim 32, Applicants argue that Matsuzaki does not disclose a spacer inserted between the lid and the ink absorbing member for pressing the ink absorbing member toward the ink supply port.

Examiner's position is that Matsuzaki discloses a spacer (projection suspended from top wall) inserted between the lid (22) and the ink absorbing member (24) for pressing the ink absorbing member toward the ink supply port (21) (Fig. 8).

Art Unit: 2863

Applicants arguments with respect to claims 19, 26, and 47 are addressed above.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

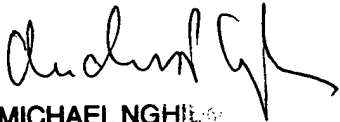
### ***Contact Information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

Art Unit: 2863

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



**MICHAEL NGHIE**  
**PRIMARY EXAMINER**

Michael Nghiem

August 8, 2003